



Improving online visibility of the web pages with Search Engine Optimization: Laurea Uni- versity of Applied Sciences

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Abstract

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This project was commissioned by Laurea University of Applied Sciences (UAS). The organization's website has a wide range of users from all over the world. It is important that the contents on the website are equally accessible to users with different abilities and disabilities (e.g. visually impaired & auditory). Search engine optimization (SEO) is one of the practices that contribute to improving web accessibility. A functioning website is one of the main means of communication for organizations. Improving the web visibility and accessibility is important and challenging. This thesis includes a literature review of the latest books and online materials about SEO, which is one of the most important and cost effective technique for digital marketing. It helps the website to rank higher in organic search results, improve the user experience and brand awareness.

The action research method was the utilized research method. The aim of this thesis is to improve the online visibility of the web pages, while the objectives are to implement on-page SEO and create a handbook. It is the final outcome aimed to help marketing department to achieve several goals, which include recommendations and information on SEO best practices. The thesis focuses on the Google search engine. Only organic traffic is taken into consideration while analysing the results. The results were compared six months before introducing the SEO and after SEO implementation. For the home page, the data from the Google Analytics shows an increase of visitors via Google organic traffic by 46.10% while increase of unique visitors by 56% in the organic traffic.

SEO is a continuous process and is constantly changing. Future research could be conducted on the role of artificial intelligence, voice and mobile search in SEO. While other areas to focus on could be the importance of SEO for user experience and improving web accessibility.

Keywords: Google Analytics, Search Engine Optimization, SEO, User experience, web accessibility

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1. Introduction

Website is part of digitalization for any size of organizations. Sharing information via a digital platform is important to reach out to the consumers/users. It is also the key resource that plays vital role in the marketing and communication. Among many, search engine optimization (SEO) is one of the element of digital marketing strategies and is a cost-effective technique.

With the constant updates in the search engine algorithms, SEO implementation needs both the marketing and IT knowledge. It is used to optimize the website to improve the search engine visibility of the website but most importantly it is also necessary to improve the user experience of different types of visitors. The web is important resource in different aspects like education, government, commerce, health care and access to information (European Commission, 2014). European Commission has further explained that improving web accessibility will increase equal access and opportunity to people with disabilities. It will also improve their participation in the society as well (European Commission, 2014).

This thesis is based on the traineeship by the author from July 2016 to December 2016. It includes theoretical background, implementation, results and handbook. The handbook includes the latest SEO practices. Website analysis was done using several tools like Microsoft SEO Toolkit, Google Analytics and trial version of Screaming frog an onsite SEO crawler software. Improving the online visibility is important for the organization to reach out to their possible students, current students, partners and stakeholders.

As the contents are uploaded from different departments it is important for content editors, writers and content managers to understand about SEO and its importance. This thesis is aimed to help understand about SEO and its latest practices.

1.1 Organization background

Laurea University of Applied Sciences was established in 1992 and operates as a limited company (Laurea -Ammatikorkeakoulu Oy). It operates in the Greater Helsinki Region. It has more than 7000 students and 500 employees and is one of the largest universities of applied sciences in Finland. Out of sixteen Bachelor's degree programs six are offered in English. Also, two Master's degree programs are delivered in English. Research Development and Innovation is one of the core area of expertise for the organization. Its focus on RDI is nursing work and coping at home, service business activities, security, social responsibility and entrepreneur-

ship. There are around 250 international partner organizations. Every year around 250 students come to Laurea as an exchange program from partner universities around the world and around 1000 students get enrolled every year on different English degree programs from around the world (Laurea LinkedIn profile, 2017).

Laurea's website is a multi-language website, namely Finnish and English. It is built with Microsoft SharePoint content management system. Implementing the SEO was part of the process to improve the online visibility of the website.

The client wants to improve the online visibility of the website. One of the purposes of the thesis is to do the market research, analyze the website from SEO perspective and implement SEO on <https://www.laurea.fi/en>.

There is a role of different departments that can contribute to improve the online visibility as every employee plays a vital role in digital marketing. E.g. SID, Library, admissions team, marketing department, international services. So, this thesis aims to provide theoretical and practical information about SEO.

1.2 Research objectives and research questions

The main objective of this project is to create a handbook after literature review, implementation of SEO and analysing the result. The other objectives include identifying the requirements for on-page SEO implementation and analysing the data from Google analytics to support the result.

Among several steps, producing the valuable research question during the research is of high importance. A clear, direct and relevant research question will guide the project and help for the development of a coherent debate that sums up the subject the researcher will examine (Centre for Innovation in Research and Teaching, n.d.). The main research question is:

How does organic search engine optimization help to improve search engine visibility of the web pages in Google search engine?

The additional questions to answer during the research are how to implement on-page SEO? and why is SEO necessary for organizations like Laurea?

SEO is divided into on-page and off-page SEO. This thesis is more focused on on-page SEO. Research methodology and tools used to analyse and implement several SEO practices are explained on the later phase of the thesis work.

1.3 Research method

To achieve the objective of the project, the author has used the action research method. When the research is part of an academic assessment there are two types of action research cycles performing side-by-side. The first one is core action research cycle which focuses on solving the practical problem. The second one is the thesis action research cycle that focuses on planning, implementing the plan, observing and reflecting with regard to the part of the research project (Zuber-Skerritt & Perry, 2002, pp. 171-179). This thesis mainly focus on the thesis action research cycle. Figure 1 shows the thesis action research cycle and is adapted from (Zuber-Skerritt & Perry, 2002).

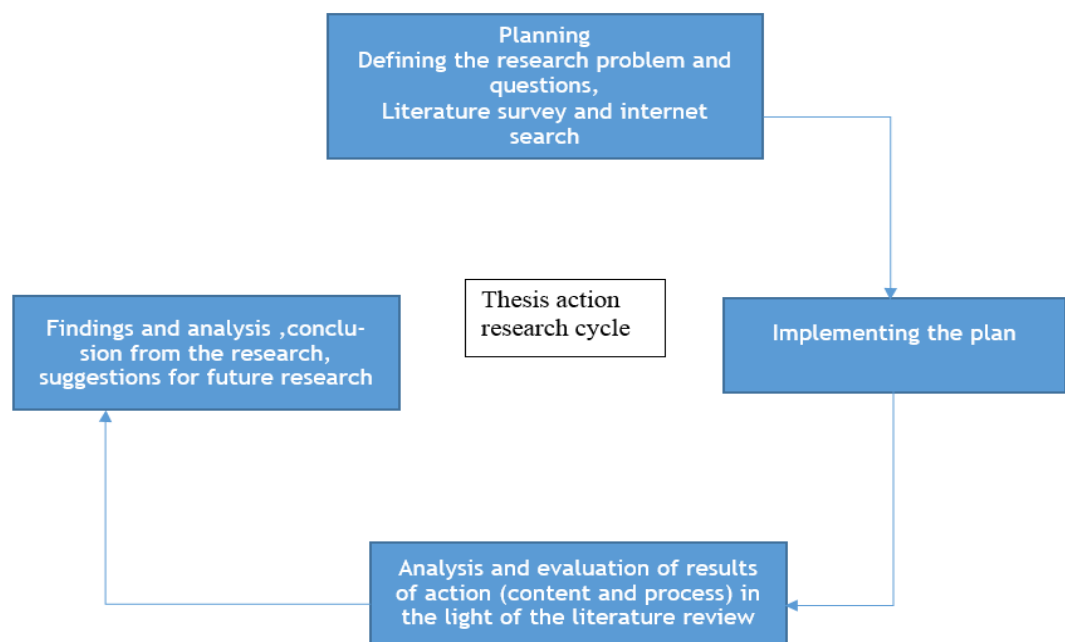


Figure 1: Thesis action research cycle

In this thesis, section 1.2 includes the research objectives and research questions. Section 2-5 includes the literature review and internet research on the related topic. Implementation of the first phase of the thesis action research cycle is explained in section 7 while analysing and evaluation of the result in performed in section 7.8. Finally, section 8 covers the conclusion and chapter 9 includes suggestions for future research.

1.4 Research Scope

This thesis focuses on exploring latest techniques and strategies of SEO that can be implemented by the organization on day to day basis. On page SEO was implemented during the traineeship period of the author from July to December 2016. The detailed information about on page optimization is included on section 4.4. Analysing data from several web analytics tools like Google analytics and other web analytics tools made the author easier to implement

the SEO. On implementation of the SEO techniques on the regular basis by several content writers, it allows the website to be more visible and accessible by the students, stakeholders and partners of the organization.

Only Google search engine and organic SEO are the focus areas of this thesis. 85 % of searchers click the natural results (Eric Enge, 2012). The search engine market share in Figure 4 shows that Google is the number one search engine. And, the substantial amount of information is available regarding Google search and search engine. Figure 2 shows that Google is the main medium users use to visit the client's website. So, for all these reasons this thesis is focused on the Google search engine.



Page ?	Traffic Source / Medium ?
1. / en	google / organic

Figure 2: Traffic source/medium (Google Analytics, 2017)

1.5 Limitations

The author was not responsible for creating new contents and was only responsible to update the available contents. He was mainly practicing the on-page SEO techniques. Hence, the result of the implementation is solely based on the on-page optimization. On-page SEO practices contribute for the ranking of certain landing pages but it alone is not enough to improve the ranking of the whole website. Organization should also focus on off-page SEO to see the relevant changes on the ranking of the website.

Another limitation for the thesis is that the author did not have permission to make any technical changes like adding or removing programming codes.

The work was done only on the English version of the website and the author was informed that the SEO has not been implemented on the website. In order to analyze the website, analyzing each landing page was the best solution. Before implementing the SEO, the author made a list of SEO techniques to be used on the website.

1.6 Structure of the thesis

The thesis is divided into several sections which help the users to follow the structure.

First section includes the introduction about the thesis topic, information about the organization, objectives and research questions, methods, research scope, limitations, structure of the thesis and about the theoretical background.

The second section covers the theoretical background about search engine. In order to implement the SEO techniques content writers and marketers need to understand the working principle of the search engine. Knowledge about the search engines will assist users to improve the existing SEO practices and implement the latest updates on SEO techniques. Different search engines have slightly different search algorithms. Google makes frequent updates on several of its search algorithms that has direct or indirect impact on the SEO practices. This thesis includes different elements of the search engines.

The third section concentrates on theoretical background about the SEO, its importance and example of search algorithms. This section also includes the information about web analytics, which aims to inform the users about the importance of web analytics. SEO is a continuous process and the techniques get updated quite often and the author mentioned some of the latest SEO practices that could be implemented on daily basis by the organization with no cost. The author studied several books, latest articles and blogs from the renowned experts on the field. To practice the on-page SEO and off-page SEO anyone from writing the content to publishing it should be aware about the changes. This section also introduced two Google search algorithms namely Google Panda and Google Penguin.

The fourth section explains in detail about the SEO strategy, on-page and off-page SEO while section 5 and 6 includes information about of on-page and off-page optimization. While section 7 includes implementation of SEO with examples. Explaining the implementation shows the contribution of the on-page SEO on web ranking and search results. It also includes analysing the collected data and results for the two-consecutive time.

Section 8 includes conclusion, while section 9 includes information about future research areas on the topic. And, finally the handbook is included in the Appendix 1. The handbook is the result of the thesis. It aims to help the organization to consider several SEO factors that can be improved or implemented in the future to reach to different user group and improve user experience and search results.

1.7 Theoretical background

All the theoretical knowledge needed to understand the SEO and its implementation are included from section 2-4. It includes information about search engine and its components, on-page and off-page SEO and short information about data analysis. It also includes short information about different search algorithms.

2. Search engine

According to Tilly & Rosenblatt (2016, 517) search engine is “an application that uses key-words and phrases to locate information on the internet”. This section includes different components of search engines namely search interface, web crawler, the database, search algorithms and information retrieval.

Search interface is the interface of the search engines, where the users first visit the page to make the search. It is the interface between users and the database. Users first visit this page to insert search queries, Figure 3 is a search interface of Google. The interface is personalized so that the users can chose several options like news, videos, images, publication and so on.



Figure 3: Example of Google search interface

Google defines web crawler as “a generic term for any program (such as a robot or spider) used to automatically discover and scan websites by following links from one webpage to another” (Google Search Console, n.d.).

Information retrieved by the web crawlers (robots, spiders) are collected in the database. Every time when we insert queries in the search engine, we are looking for the information on that database (Michigan Public Health Training Center, ei pvm).

Google defines search algorithms as “the computer processes and formulas that take your questions and turn them into answers” (GoogleInside Search, 2012). Each search engines uses algorithms that are slightly different. So, with the same search query there is a chance to see slightly different results on the SERPs.

Web crawlers, database, search interface and the algorithms are the leading factors of a search engine. Search engines show the results on the search interface using these components. There are two major factors they scan while searching for the information namely contents of the website and inbound links.

While indexing the website web crawlers scan every page and find out the information about the topics available on the website. Also, they scan the back-end code searching for tags, description and instruction. Also, while indexing the webpages, web robots search for the links from the other websites that have links to the website. Inbound links increase the authority or influence to the site. If the inbound links are from the more authoritative website like Harvard scholar website (<http://scholar.harvard.edu>), it will have higher addition to the authority or influence rather than a small website.

Once the search queries are inserted in the search interface, search engines look for the most relevant information in its index and display on the SERPs. Information is displayed in the order of the relevant and authoritative. There are several factors affecting the relevance like domain name, keywords, domain history, content length, title tags, grammar, keyword density and much more. There are around 200 factors that Google takes into consideration to show the search result (Google, 2012). Figure 4, shows several ranking factors for Google. Searcher's geographical location, user browsing history, search history of the website (how many times has it been visited before), reciprocal or one-way link are other factors that affect the search result.

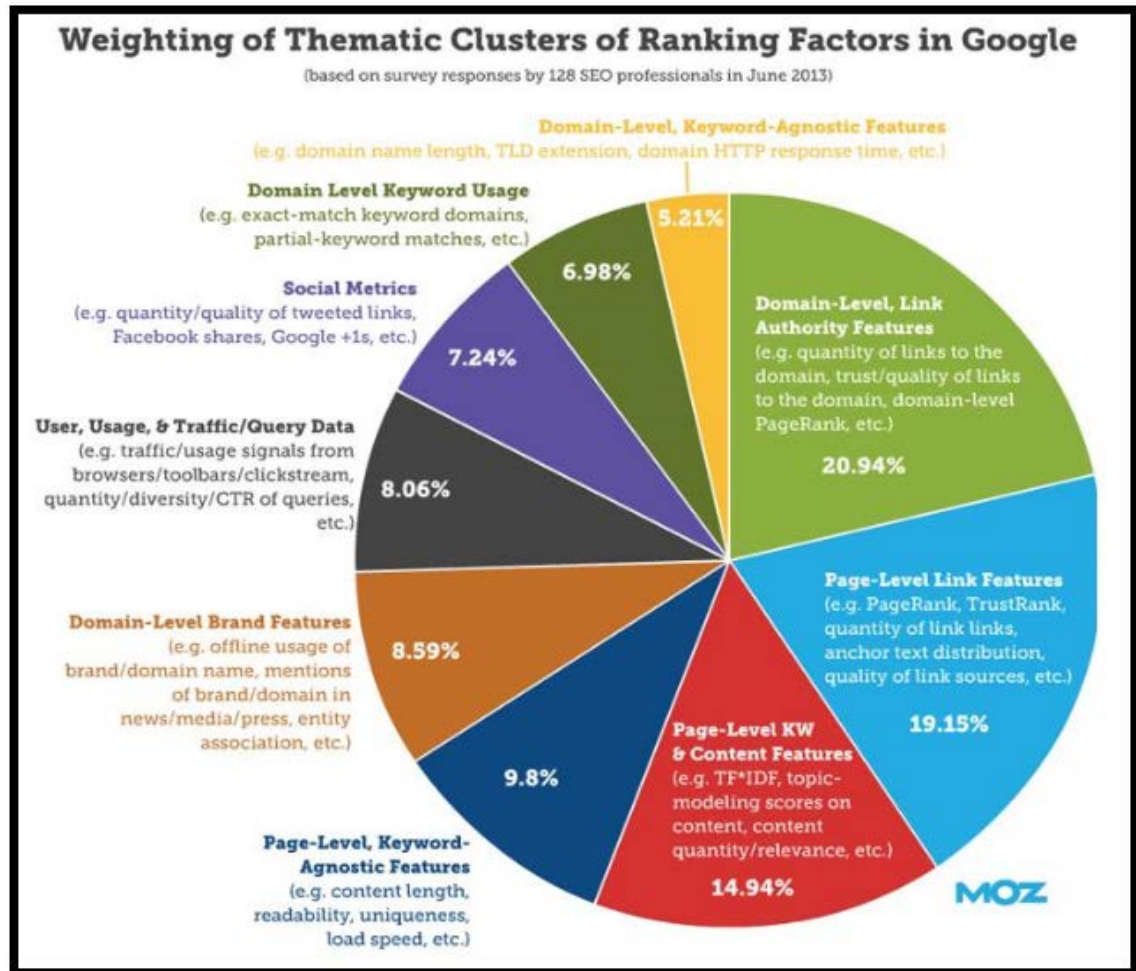


Figure 4: Google ranking factors (Moz, 2013)

2.1 Search engine market share

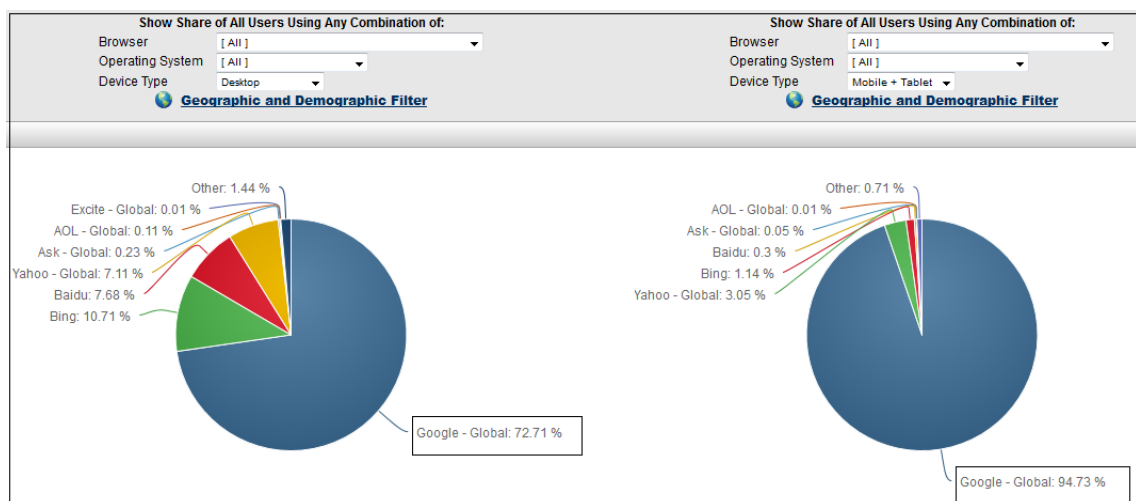


Figure 5: Search engine market share (Netmarketshare, 2017)

Figure 5 shows the search engine market share for different types of devices. From January 2016 to February 2017, Google has 94.73% of total market share for mobile and tablet devices while for the same time frame the market share for the desktop is 72.71%.

2.2 Organic vs Paid results

When a user types the search query, search engine gives two types of results, namely organic results and paid results or advertisement. Organic results are the listings of websites based on the relevance of the search query with the content. It is also called natural search results. SEO plays an important role for those organic listings of the website (Kent, 2015).

Paid results are the advertisements, companies pay for their webpages to be displayed for certain keywords, so whenever someone types the search query containing those keywords those pages will be listed on the result. Figure 6 shows the example of organic and paid results in Google search for the term cheap hotels.

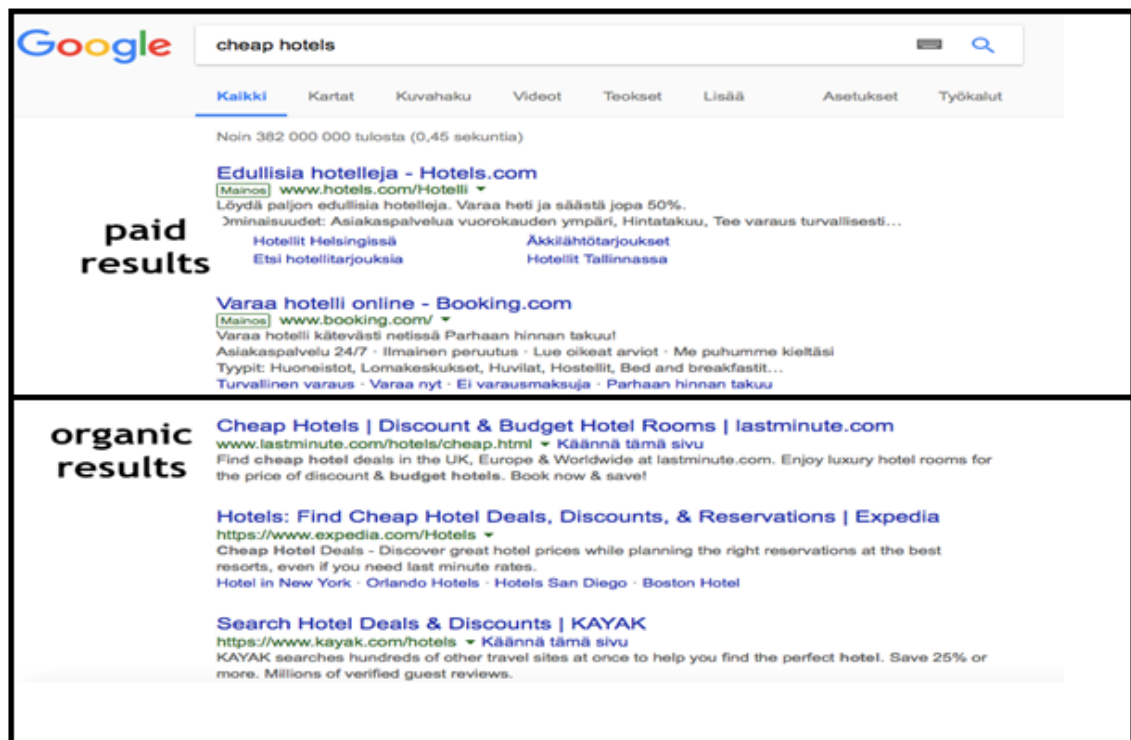


Figure 6: Paid and organic result

3. Search Engine Optimization (SEO)

(Mastykarz, 2014), a Microsoft SharePoint Server MVP and Technical SharePoint Specialist for Mavention defines SEO as "a common name for a number of activities that focus on increasing the ranking of a website in the search results. With regard to the application area, SEO can be divided into two categories: technology- and content-related." This thesis focused mainly on the content based SEO.

It is also the procedure which helps the website improve web ranking on organic search by making it more visible for people looking for the brand, product or services via search engines (Sprung, 2014).

While, (Anderson, 2017) said that "Search Engine Optimization in 2017 is a technical, analytical and creative process to improve the visibility of a website in search engines. Its primary function is to drive more visits to a site that convert into sales."

SEO is necessary for several reasons. An important aspect of SEO is to make the website more user friendly and easily understandable for search robots. Even though search engine does not understand the website as we do. SEO helps search engine understand about the content of the website and how it is useful for users (Moz, no date). Improving visitors on SERP, improving results and page ranking on organic search, contribution on brand awareness and consistent search results and improving web accessibility are some of the advantages of proper SEO implementation.

3.1 Some examples of google search algorithm updates

Google updates its search algorithms several times a year, some of them are considered as major while some of them are minor updates (DiSilvestro, 2017). It is important to be up to date with the updates to make necessary changes in the SEO practices for the organization and to avoid falling in the Google's spamming filters. In this section I will shortly explain about some of the major Google search algorithms.

Algorithm with codenamed Florida was released by Google in November 2003 which target to stop spammers. The update targeted the keyword stuffing and make it completely useless. The long history of algorithm updates by Google has started since then. Frequent updates of the algorithms make it difficult for everyone for web ranking (Clarke, 2017, pp. 12-13).

One of the major search algorithm is Google Panda which was released on February 2011 (Schwartz, 2016). It is the filter that checks the quality of the content and especially targets the poor-quality content. It prevents poor quality content from ranking high in Google search result pages (SERPs). Whenever Google make the major update on this algorithm, site might drop organic traffic, ranking or vice-versa.

Panda algorithm has been updated 28th times since then. It changed the way how practitioners create content strategy, keyword research and link building strategy. High-quality relevant inbound links adds SEO value to the website. (Patel, n.d.). Regarding the Panda algo-

rithm, Amit Singhal (Singhal, 2011) suggested that low quality content in the website can impact the overall ranking of the website. So, merging or improving the content of the pages to improve the quality could help the ranking of the higher-quality content.

Another major update in search engine was the algorithm named penguin in 2012 (Illyes, 2016) , that punished the sites mostly based on spamming the search results by buying links or obtaining links only to increase the Google ranking. It was last updated on September 23 2016 since the release. Garry Illyes from the google search ranking team has mentioned two major changes on the blog with the heading "Penguin is now part of our core algorithm" (Illyes, 2016). Two major changes recognized in the blog were.

- Real-time

"Penguin's data is refreshed in real time, so changes will be visible much faster, typically taking effect shortly after we recrawl and reindex a page" (Illyes, 2016).

- Penguin is now more granular

“Penguin now devalues spam by adjusting ranking based on spam signals, rather than affecting ranking of the whole site”.

As part of controlling the web spam by Google an update on doorway pages took place on March 2015 (White, 2015). It defined doorway pages as “sites or pages created to rank highly for specific search queries. They are bad for users because they can lead to multiple similar pages in user search results, where each result ends up taking the user to essentially the same destination. They can also lead users to intermediate pages that are not as useful as the final destination” (Google Search Console Help, n.d.).

3.1.1 Why is it necessary to know about algorithms?

Above, the author has shortly explained about few of the search algorithms. So why is it necessary to understand about them? In this paragraph the author have shortly explained about it. With the knowledge and understanding of the algorithms updates it will assist content writer or marketing personal to properly plan and implement the SEO strategy. It will help to make related changes on SEO practices. Due to algorithm updates, which will help to avoid from being penalized in certain circumstances. Understanding the factors behind the search will be the good foundation behind SEO implementation. Most importantly being up to date with the search algorithms updates will be a good competitive advantage for the organization.

3.2 Schema.org

Schema markup is considered as the latest evolution in SEO. It is formed in cooperation between Google, Bing, Yandex and Yahoo to inform their search engines about the content of the website and to show the best results for the users. Not only that adding Schema markup in HTML will enhance the search results in SERPs by adding the rich snippets which are displayed below the search page title (Anon., n.d.). According to Edward (Anon., 2015) adding organization schema markup will develop brand signals to improve the knowledge graph entry. So, the organization’s information will be displayed on the SERPs. He further added that using website schema markup will result the search box feature for the brand in SERPs. Figure 6 shows an example of search box for the brand-named Apple.

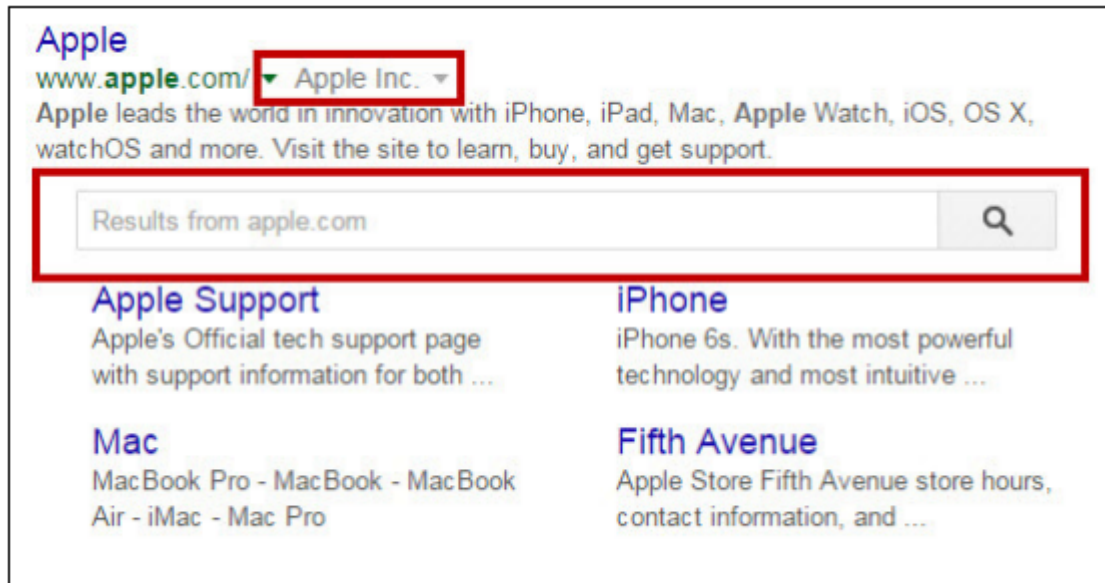


Figure 7: Example of search box

By adding schema markup in the HTML tags on the website it will specifically help search engines understand the information available on the website and help the users to provide the most relevant answers on search.

There is a long list of schema types. Creative works (CreativeWork, Book, Movie, MusicRecording, Recipe, TVSeries...), embedded non-text objects (AudioObject, ImageObject, VideoObject), event, organization, person, place, LocalBusiness, restaurant, product, offer, review etc. are most commonly used ones mentioned by schema.org website (Anon., n.d.).

3.3 Web analytics

Beasley (2013, p. 2) defined web analytics as “a way of learning how users interact with websites and mobile apps by automatically recording aspects of users’ behaviour and then combining and transforming the behaviour into data that can be analysed.”

Knowledge about web analytics will help marketing team to measure and improve the performance of several digital marketing strategies. It uses statistics, mining techniques in a methodological process. Analysing the results from the data and understanding of how it can be implemented is an art. Improving the website requires knowledge about user-centric design, content, promotions, and more. The analyst works together with different departments like IT, marketing, management and with customers (Daniel Wesberg, 2009).

There are several web analytics tools like Piwik, AwStats, Kissmetrics, Google Analytics and so much more. Among all, Google analytics is considered as the most popular analytics service that provides several statistics and is free of charge. With this analytics service, it is possible

to analyze the success of the marketing campaign performed with website as the medium. Analyzing the data will give an insight about the improvement areas. Depending upon the practices, the framework to analyze the performance of the website can include the following steps (Waisberg & Kaushik, 2009).

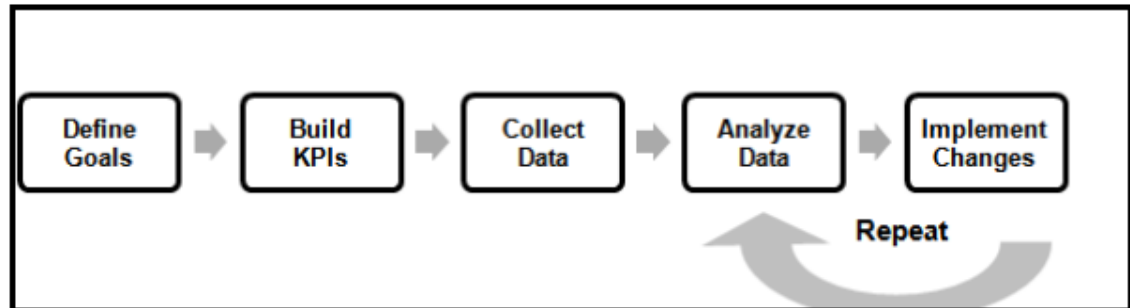


Figure 8: The web analytics process (Waisberg & Kaushik, 2009)

Define Goals

Each organization have their own goal with their website. For this case the goal of the website is to provide information to current students, future students, partner organizations, all kinds of stakeholders and promote the brand.

SEO Metrics and (KPIs)

SEO metrics and KPIs are values that must be calculated by marketing department to check the achievement of the website for organic search results. To make the website more effective for marketing it is important to measure SEO metrics and track changes on monthly basis (Anon., n.d.). Keyword ranking, domain authority, organic traffic on home and landing pages, referral traffic increment, brand mentions and brand search traffic and total number of links built are some of the key SEO metrics and KPI that can be measured.

Data collection and data analysis

Accurate and timely data collection will make the data analysis process much easier. While, data analysis gives the result of the implementation as well as the idea for the improvements. With Google analytics, several reports can be analyzed. Some of them are information:

- related to several pages like page views, unique pageviews, average time on the page, bounce rate and so on.
- about site speed including individual page speed
- user behavior like their activities on the website.
- source of traffic to the website like referrals, PPC, organic search or direct search etc.

Getting more visitors to the website is what every marketer wants. It does not make sense if the data cannot be used properly to analyze the customer behavior on the website. A search engine optimization strategy cannot be successful if the data are not analyzed from the web analytics tool. For this thesis, only the metrics for organic search results is analyzed.

4. SEO Strategy

SEO strategy is the important element that defines the success of the SEO implementation to achieve the marketing goal. Creating the strategy starts even before the development of the website. In a situation, when a website is online, creating an effective SEO strategy will help both users and search engines to better understand the contents of the website. It helps the web ranking of the website when a user makes the search with keyword or phrase (Ledford, 2008, p. 33).

There are several steps to create a SEO strategy. As the website for the thesis is content based website, the author has focused on target audience, keyword research, content development and link building processes.

4.1 Knowing the target audience

Before anything, it is very important to know about the target audience. Who are we targeting to reach via our website? What do they want from the website? Cambridge dictionary defined target audience as “the particular group of people to which an advertisement, a product, a website or a television or radio programme is directed. Depending on the product and services there can be several personas. Having better understanding of personas will make it much easier to write new contents or modify available contents and implement SEO practices. It will finally be easier to connect with each of those personas group.

4.2 Keyword Research

Keywords are still one of the important and valuable aspects in the SEO practices and keyword research is one of the integral part of the SEO projects. There are two specific reasons behind the importance. First, if the web ranking for the website improves for the wrong keywords, it means targeted keywords are not helping to get the web traffic. Second, if the keyword competitiveness is not measured properly the might not appear on the first page meaning it is not easy to rank with the competitive keywords (Clarke, 2017, p. 21).

Once it is clear with the persons or the target audience, it is much easier to do the keyword research. Different experts have explained that there are more types of keywords other than short keywords and long tail keywords like transactional keywords, navigational keywords,

and informational keywords. “Long-tail, informational and transactional keywords are good keywords for most SEO projects” (Clarke, 2017, p. 23).

Short keywords contain one or two words e.g. “degree programme” while long-tail keywords contain three or more words e.g. “degree programme in business management”. Long tail keywords are the type of keywords visitors are likely to use during their search. Shorter keywords have higher competition while long tail keywords have less competition (Rakt, 2016). Figure 9 shows the demand curve for long tail keywords.

Informational keywords are used to find the certain information like what is Siri, how far is New York from Helsinki and so on. While transactional keywords are those used by users with intention to have more interaction on the website like buying a product or service, signing up or registering, downloading and so on.

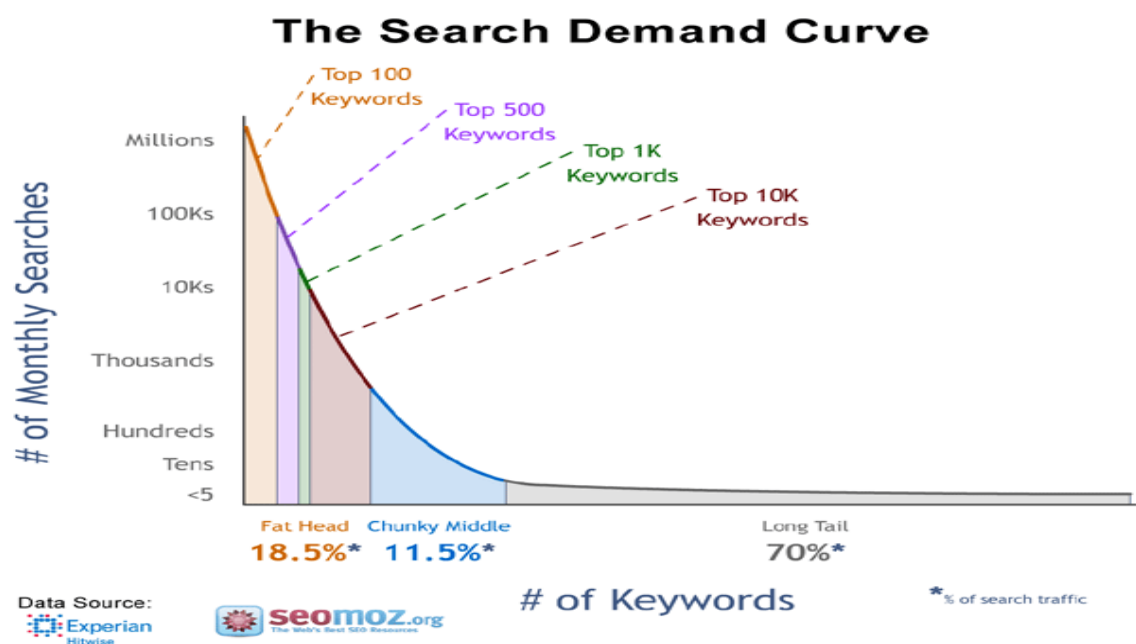


Figure 9: Keyword demand curve, (Moz, 2009)

While doing the keyword research it is also important to collect semantically correct keywords and analyse competitor’s keywords. Doing so helps to identify keywords that are not targeted by competitors. Identifying the targeted keyword is not that easy but using Google Keyword planner and Google trends is a good option to analyse them. With Google trends, it is even easier to compare keyword traffics for various geographical location. Google also provides auto complete option on Google search, it will help identify what results are displayed on the SERPs with those keywords. There are several other platforms that provides keyword

research tools like wordstream, moz, freshkey, soolve, competitor source code, ubersuggest, competitive keyword discovery by searchmetrics and so on. Not to forget, keywords used by the current users can be found from the internal search engine using Google Analytics. By analysing different metrics like search volume, keyword density, location and competition, it is easier to select the necessary keywords.

If the page is to rank higher in the SERPs it is important to collect latent semantic indexing (LSI) keywords which is related to synonyms or related keywords. LSI keywords helps Google to make right guess about the content (Sanders, 2016).

4.3 Content development

Content development is another important aspect of the SEO strategy. It is the main ingredients of the website. Search engines crawl through the pages to find the user intent so before anything, the purpose of the page should be clear. It will help to list out the targeted keywords which will make the content writing process much easier. Another important aspect to consider during content creation is the user experience. Also, the quality of the content which is the most important factor to focus to receive more organic traffic from Google (Anderson, 2016). After identifying the targeted audience and performing keyword research writing a quality content is another key aspect of the SEO strategy. Google quality guidelines suggest that a quality content does not include broken links, grammar and spelling errors. Structured text is more helpful for both the users and the search engines meaning dividing content into different headings, paragraphs, using bullet points, bold and italic text. Doing so will also improve the readability of the text and so does user experience. Powerful headings attract users. If the content is properly written and structured, there is a chance that users will read the content. More time on the page will decrease the bounce rates which help for the web page ranking (Rakt, 2016).

Content should be created around the targeted keywords. Relevant keywords and synonyms should be used across the content but using excessive number of keywords is considered as keyword stuffing. Filling pages with keywords or numbers results in a negative user experience, and can harm your site's ranking. Keywords stuffing is penalized by advance systems like latent semantic indexing(LSI), latent Dirichlet allocation (LDA), and term frequency-inverse document frequency (TF-IDF), which use term frequency to regulate the quality of the content. It means that search engines understand what words statistically occur together and make correlations (Sanders, 2016).

Google suggests to make appropriate use of keywords to make useful and informative content. A webpage with longer content has higher chance to rank better on the SERPs. It is because there is an opportunity to use keywords and its re several times in the content. Also,

Google pulls out key information from the content and post it in the search result snippets of that page. Using keywords variants and synonyms search engine will have more indication to understand about the content. Marie van de rakt from yoast suggest to have a post with 1000 words or more to increase the ranking of the page in Google (Rakt, 2016).

Apart from using headings, titles and bullet points, using images and videos in the content will improve user engagement and user experience. Using visual elements in the content will also increase the option to use targeted keywords on their file name and alt tags. It will also contribute for the image and video search results. Especially video contents are on the rise and including relevant videos on the content will increase its quality. Internet video streaming is on the rise and covers the wide share of bandwidth. By 2020 more than 80 % of all consumer internet traffic will be via video streaming (Anon., 2016).

Page speed is also another factor that affects the ranking of the page. Large file size increases the loading time of the page. So, minimizing the file size before uploading them is important.

5. On page optimization

On page optimization is a SEO practice to optimize elements in the website to improve the search engine visibility on organic search. Technopedia explains on page optimization as “On-page optimization primarily configures and matches the structural elements of a website with how a search engine reviews a website, against a search query. The more the website is optimized in line with how a search engine shortlists and rank websites, the better its chances of being visible and ranking higher in search engines' results pages.” (Anon., 2016). This thesis is mainly focused on the on-page optimization techniques.

5.1 Title tags

Title tag is the title of the webpage; it appears in the preview snippets of the webpage in SERPs and on the browser. It explains both the search engine and users about the content of the page. It should be identical to the other pages of the website. Duplicating the title content from the page content is not helpful. A short, descriptive, clear and keyword rich page title help the page to rank higher in the Google search results pages. Using keywords at the beginning of the page title adds more SEO value for higher ranking (Fishkin, et al., 2013, p. 33). Figure 10 shows the example of title tag on SERPs.

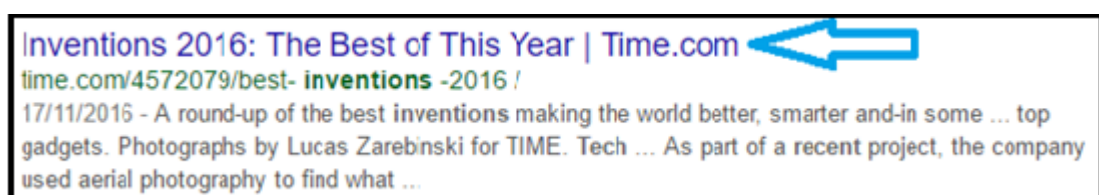


Figure 10: Example of title tag on SERPs

5.2 Meta Description

Meta description is not used for ranking by search engines but it is the area to explain the users and search engines about the content of the page. A properly written meta description attracts user attention. Google displays 160 characters so it should be short and descriptive. Including targeted keywords will help to improve click through rate. Using synonyms will help to avoid from being flagged for keyword stuffing in the meta description. Figure 11 shows the example of bolding on exact matched keywords in the meta description on SERPs.

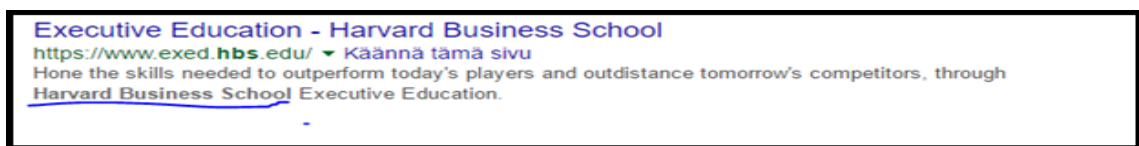


Figure 11: Bolding example on meta description

5.3 Structured data markup

More about the structured data markup is mentioned on section 3.4 of the thesis. Using schema markup will add the on-page SEO value for the website.

5.4 URLs

While creating a new page or URL on the website keeping it short and descriptive is considered more user friendly and is more focused. Using targeted keywords closer to the domain name is considered as a plus. Stop words and verbs does not add any value to the URL, so those words should be avoided.

5.5 Body Tags

Body section of the content should include various keywords and its synonyms on different section of it. First paragraph of the body is important for both users and search engines so it should include the targeted keywords. Content should be written for the users on mind.

5.6 Headings

Header tags are another important factor for on page SEO because clear and descriptive headings give a proper idea about the content of the page. Even though it has very low correlation with the ranking factors, it is good to use targeted keywords/phrase on h1 for semantic and SEO reasons. Creating a clear heading hierarchy will make the content more readable and more user friendly.

5.7 Image filename and alternative text

The image should be relevant to the content of the page or descriptive to the page. Targeted keywords can be used for the image file name. It can help drive users to the page from the image search results.

Using alternative text to the image is another on page SEO practice for several good reasons. Search engines does not understand the image but can read the alternative text. In cases like, if users turned off the images in their web browser and users using screen reader due to visual impairment will not miss any information about the image. This practice will also contribute to the user experience.

5.8 Internal Links and anchor text

Internal links are the links that directs users to the different page of the same website. Links directing to the main page or different landing pages increases the relevancy and page authority of the particular page. Partick Stox, an SEO specialist for IBM explains that there should be a reason to use internal links. These links are important to build the relevancy and authority of the page (Stox, 2015). A page receiving higher percentage of links from different pages within the site ranks higher in the SERPs. It is because it explains search engine about the importance of the page. But linking a page with the same anchor text is considered as spam, so changing the anchor text is important. Search engines does not understand the links if the anchor text does not explain where the link will direct the user. But adding keyword rich description/anchor text for the link will do so. Adding internal links on the content will allows users to find more related information within the website.

Opening the internal link on the same window is a good SEO practice as it adds value to the user experience. It helps to track the user movement within the site and increases the page-views, time on site and decreases the bounce rate. It makes easier for users using screen reader to follow the information on the page. Users will get more related information with an access to visit different pages. If the link is going to open in the new window having a text near to the link e.g. opens in new window will help all kinds of users.

6. Off-Page optimization

Off-page optimization techniques are the practices that are applied outside the website to increase the web rank, traffic and visibility in the search engine. The Off-page optimization techniques refer to the methods you apply outside the website to increase its rank, traffic, and visibility in the search engine (Elmansy, 2014). Link building, brand mentions and use of social media are some of the important techniques of off-page SEO.

6.1 Link building

Inbound links are most dominant source in SEO. It is of high importance as it has the ability to rank a website by adding targeted keywords, relevant links and receiving trustworthy links to the website. In search engine optimization, inbound links are a marketer's most powerful asset (Vaughan, 2011).

Exchanging links with partner organizations or organizations who runs similar businesses is the authoritative and relevant link building technique. On the other hand, guest blogging, press releases, and brand mention on the social media channels are other ways to receive inbound link. Links from websites with dot Edu and dot Gov domains creates more value to the website (Patel & Dean, n.d.). Fixing broken links is also the part of the link building process.

6.2 Social Media

Social media channels like Facebook, Twitter, Google+, LinkedIn, and so on have massive number of users. These are the platform to connect with the customers on real-time, building relationship and promoting contents. SEO and social media marketing are organic and part of inbound strategies to attract visitors to the website naturally. Matt Cutts from Google mentioned on a video (Cutts, 2014) that even though social signals are not part of the search ranking algorithms presence of social signals can impact to improve search rankings (DeMers, 2015). According to the research from hubspot 58% of marketers using social media for more than year have seen improved search rankings while more than 84 % of participants found the increased in web traffic by investing around 6 hours per week on social media (Kusinitz, 2014) and over 84% of participants found that increased traffic occurred with as little as 6 hours per week invested in social media marketing (Kusinitz, 2014). Social media posts can be optimized with descriptive text to improve natural search results.

6.3 Importance of Google+ for SEO

Using Google+ has SEO advantage. Google owns the Google+ as it owns YouTube so when it comes to showing the search results on Google it will favour its own content. Being active on Google+ will contribute to improve the search result. It is also the competitive advantage (Coles, 2014).

According to the research result from HubSpot on the data of 5,000 businesses on referral traffic, those websites with installed Google plus button received 3.5 times more traffic from Google+ than websites without installed button (Georgieva, 2017). Google+ help users to categorize contents so that it makes easier to distribute different kinds of information. Using Google+ not only has dominant SEO benefits but also it lets organizations to independently target particular group of users (Wishpond Ebook, 2017).

6.4 LinkedIn SlideShare

SlideShare is a LinkedIn owned slide hosting service that supports documents, pdf, presentations and videos. Using SlideShare will contribute for SEO and brand awareness. Understanding the targeted audience (personas) and creating content for them will help to reach those audience who are interested in the service. Uploading content to SlideShare helps to reach the target audience who are interested in the content. Out of 70 million visitors more than 80 % use targeted search. It will help to build the reputation with targeted audience (Anon., 2017). Uploading the keyword reach titles, description, adding linkbacks to the website and social media channels will contribute to improve the search results both on the search engines and within the LinkedIn SlideShare, meaning it improves the brand awareness. So, the SEO power of SlideShare can improve brand awareness and increase social engagement.

7. Implementations

SEO implementations was performed on the English version of the organization's website (<https://www.laurea.fi/en>). It is built with Microsoft SharePoint content management system. By clicking the edit page option and from edit properties, we can get to the SEO properties option. Figure 12 shows the example of SEO properties in SharePoint CMS. Browser title, meta description, keywords, option to choose if the search engine should exclude the page from search results are the options available for publishing pages on SharePoint.

SharePoint

Audio Cameras Computers Home appliances Phones TV and video

SEO Properties

Browser Title
You can customize the text that appears in the title bar of the web browsers viewing this page.
Please enter between 5 and 25 characters in this field.
Tablets

Meta Description
Search Engines may display this text under a link to this page on a search results page.
Please enter between 25 and 150 characters in this field.
Best tablet offers on the web.

Keywords
Provide keywords that describe the intent of this page. Separate each keyword with a comma.

Audio
Car audio
Headphones
MP3
Speakers

Cameras
Camcorders
Camera accessories
Digital cameras
Digital SLR cameras

Computers
Computers accessories
Desktops
Laptops

Figure 12: Example of SEO properties in SharePoint CMS (Mastykarz, 2014)

By default, SharePoint use the title given to the page as the browser title. From the edit SEO properties page, there is an option to customize the browser title. As discussed earlier the browser title should be optimized to improve the SEO performance.

7.1 Page title

The title for several landing pages and sub-pages were customized from SEO properties option. Keywords were analysed using Google trends, Google keyword planner and competitor analysis was done manually using Google search engine. Figure 13 shows the example of customized page title.

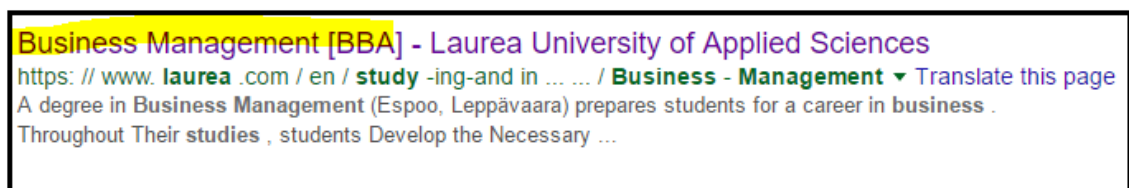


Figure 13: Example of customized page title

7.2 Page Headings

Targeted keywords were implemented in the h1 section of the page. The name of the heading is different than that of the title of the page. Content of the page is organized using different headings to increase the readability. Figure 13 is the newly created page and headings and title of the page use targeted and relevant keywords. It shows the customized and different page title.

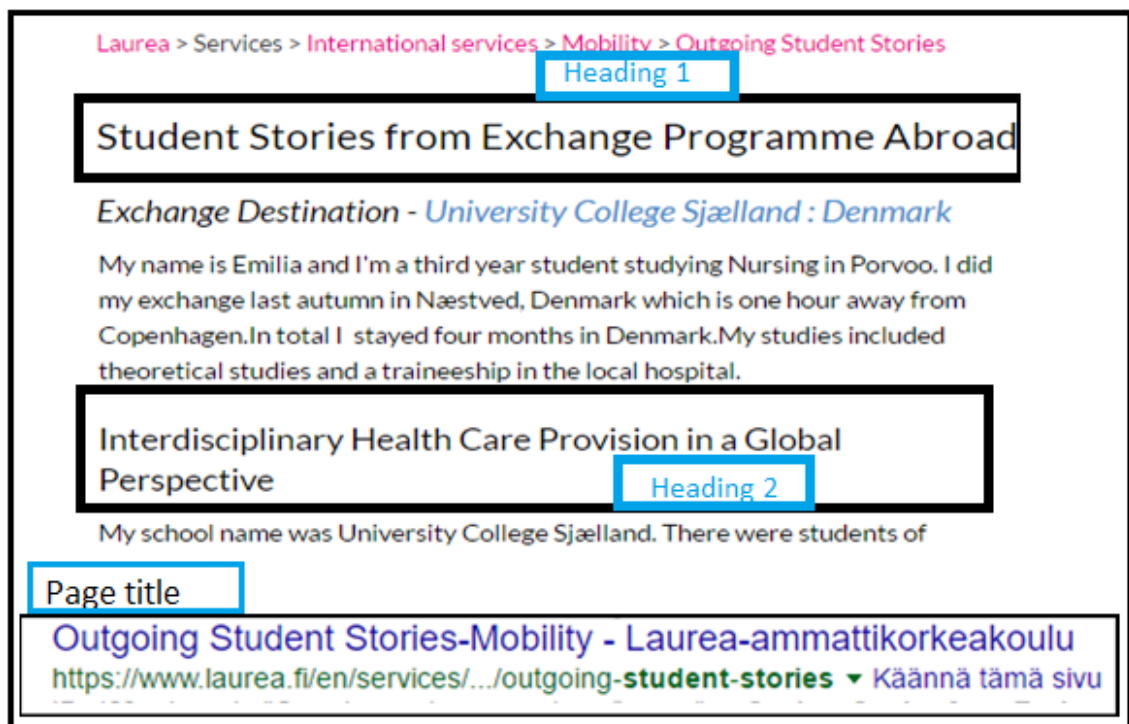


Figure 14: Optimized page heading example

7.3 External link and Anchor text

When it comes to the external link on the existing contents, mostly the anchor text was re-named to a descriptive text. In some of the pages external links were added to high authority page. The study conducted by a marketing firm named Reboot shows that by adding relevant outgoing links on the content of the page are considered by the search algorithms. It determines the authority of the page and adds SEO value on search rankings (Aharony, 2016). Figure 15 shows the outgoing link to the respective page on studyinfo.fi

Bachelor's degree programme	Bachelor's Degree title
Degree Programme in Business Management	Bachelor of Business Administration, tradenomi (AMK)
Degree Programme in Restaurant Entrepreneurship	Bachelor of Hospitality Management, restonomi (AMK)
Degree Programme in Business Information Technology	Bachelor of Business Administration, tradenomi (AMK)

Figure 15: External links and anchor text

7.4 Identical page name, heading 1 and page title

In several pages of the website page name, heading 1 and page title were optimized. Figure 16 is an example of identical page name, heading 1 and page title in SERPs.

Laurea > Services > International services > Mobility > **Outgoing Student Stories**

Page name

Heading 1

Student Stories from Exchange Programme Abroad

Exchange Destination - University College Sjælland : Denmark

Page title in SERPs

Outgoing Student Stories-Mobility - Laurea-ammattikorkeakoulu

<https://www.laurea.fi/en/services/.../outgoing-student-stories> ▼ Käännä tämä sivu

Figure 16: identical page name, heading and page title

7.5 Internal links and anchor text

Adding internal links and updating the anchor text for the link was another part of the SEO implementation. Figure 17 shows the example of internal links and descriptive text.

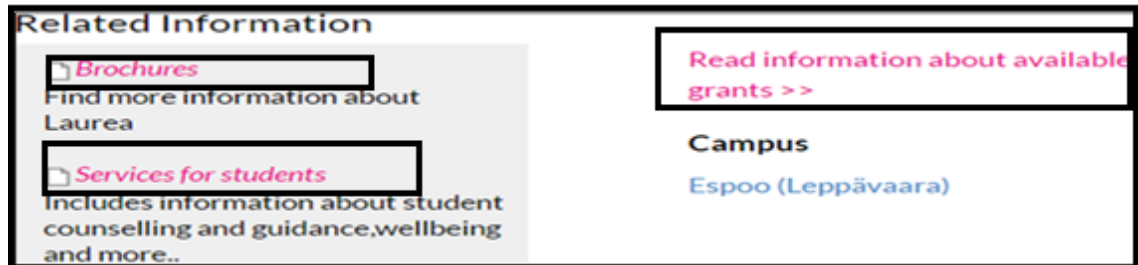


Figure 17: Internal links and anchor text

7.6 Image name and alternative text

Every page includes the hero image which is part of the structure of the page. Throughout the website image links are used on several landing pages and subpages. As discussed earlier about the importance of the image file name and the alternative text images were optimized using relevant and semantic keywords. The yellow highlighted section on Figure 18 shows the example of the optimized image.



Figure 18: Image name and alternative text

7.7 YouTube Video Optimization

A proper video filename is better than an auto generated name. Adding link to the website on the top of the description will help to increase the click through rate (CTR) for the website. (Dean, 2016) from backlinko suggest to have at least 250 words of description, keywords on the first 25 words and using related keywords several times on the description will add SEO value to the video.

There are several factors affecting the ranking of the video like total number of shares on social media channels by the users, total likes, and subscription after watching the video and so on. Adding keywords as tags will help to rank for the targeted keywords and the video will show up more often as related video on the side bar of the YouTube for those tags.

Example SEO results

The following results are based on the implementation of on-page SEO techniques. Web ranking of particular pages were tested using search terms based on the researched and implemented keywords. While, Google analytics was used to analysed the data for web traffic.

These results are included to show that on-page SEO implementation does contribute to improve the search results and web ranking.

Figure 19 shows the result for the webpage “Degree programme in Business Management”. It shows that it appears on the first page of the SERPs with the search term “Degree programme in business management Finland”. Figure 20, bolding on a cached page verifies the impact of the on-page SEO implementation and in particular with heading one, image filename and alternative text.

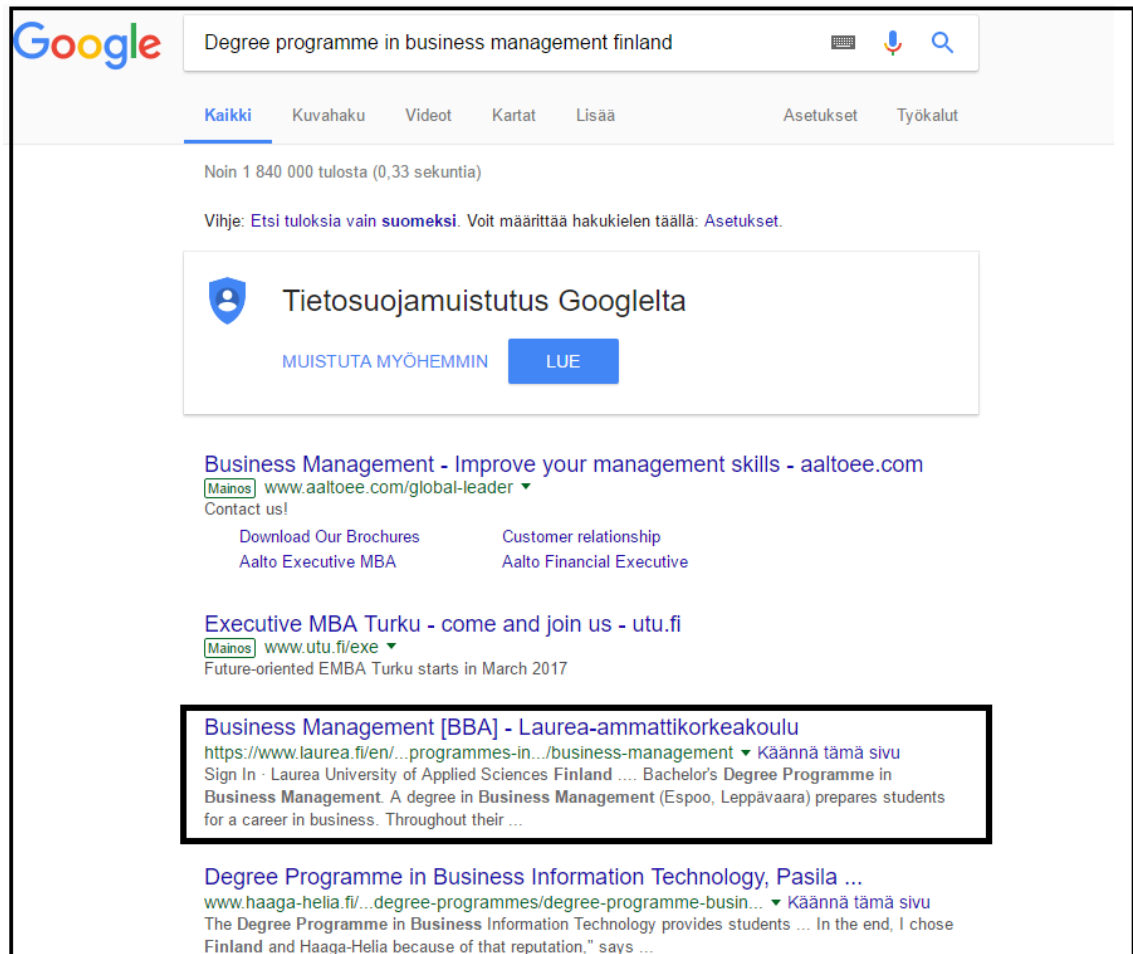


Figure 19: Search results with targeted keywords

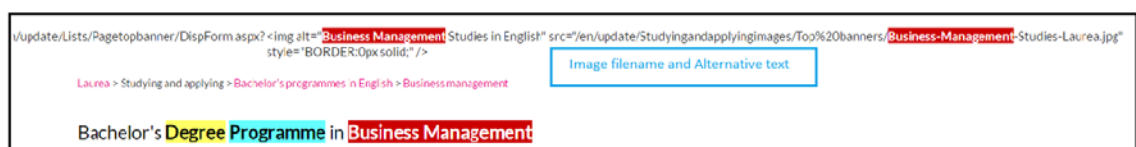


Figure 20: Bing cached page example

Bachelor degree programme page

Figure 21 shows the search result for the search term “bachelor’s programmes in English Finland”. The page appears on the first page and there is only one university page that appears above it. Figure 22 is the cached file for the same page and the highlighted section on the file shows that the descriptive alternative text and image filename does contribute for the search result.

This page is full of image links and includes the hero image and several image links. Initially the images used on the page were not SEO friendly. The only option to optimize this page is to properly name the images and use alternative text. Keyword research and competitive analysis were performed while naming the image file. The bolding text on the search result shows that the search engine finds the relevant search queries on the alternative text.

Noin 1 750 000 tulosta (0,64 sekuntia)

Tarkoititko: *bachelor's* programme in english Finland

Bachelor's degrees | Studyinfinland.fi
www.studyinfinland.fi/what_to_study/bachelors_degrees ▼ Käännä tämä sivu
 15.12.2016 - The Finnish Universities of applied sciences (UAS) provide over 100 **Bachelor's degree programmes in English**, in various fields of study.

Many study programmes in English | Studyinfinland.fi
www.studyinfinland.fi/.../finland/many_study_programmes_in_engli... ▼ Käännä tämä sivu
 12.12.2016 - Finnish institutions provide over 450 **English-speaking degree** and ... official Finnish higher education **Bachelor's**, Master's or Doctoral **degree**.

7 Bachelor of Science Bachelor's degrees in Finland - BachelorsPortal ...
www.bachelorsportal.eu > Countries > Finland ▼ Käännä tämä sivu
 Study **Bachelor** of Science courses or programmes in Finland - find 7 **Bachelor** of ... Many universities in Finland offer study programmes taught in **English**.

Bachelors in Finland - BachelorsPortal.eu
www.bachelorsportal.eu > Countries ▼ Käännä tämä sivu
 Finland View All **Bachelor's Degrees** In Finland. Take a free test to find out provide a wide range of high-quality **programmes in English** for exchange and ...

Bachelor's studies in English - Tampere University of Technology
www.tut.fi/en/admissions/bachelors-studies-in-english/index.htm ▼ Käännä tämä sivu
 Now, Tampere University of Technology offers **Finland's** first University-level **Bachelor's programme** taught in **English** in the field of technology. With the choice of ...

Best 24 Bachelor Degrees in Finland 2017 - Bachelorstudies
<https://www.bachelorstudies.com> > Bachelor > Finland ▼ Käännä tämä sivu
 Contact Schools Directly Top **Bachelor's Programs** in Finland 2017. ... The entire programme is conducted in **English**. [+]. About the **Program Degree: Bachelor** of ...

Bachelor's Programmes in English - Laurea-ammattikorkeakoulu
<https://www.laurea.fi/en/studying.../bachelors-programmes-in-englis...> ▼ Käännä tämä sivu
<https://www.laurea.fi/en/update/Lists/Pagetopbanner/DispForm.aspx?ID=30>,
Bachelor Degree Programme Laurea UAS **Finland** ...

Figure 21: Bachelor Programmes in English page appears on the first page of SERPs

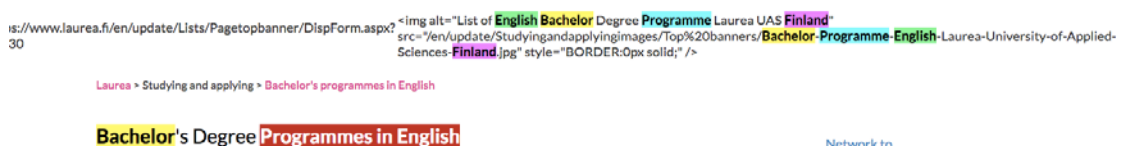


Figure 22: Cached file for Bachelor's programmes page

Video search results an example

Title of the video, tags, short description, links to the R&D page and twitter profiles were added on the existing YouTube videos. Here are some of the result for the targeted keywords in YouTube search and Google video search.

Figure 23 and Figure 24 are the example results of SEO friendly video title and description. The bolding of the search keywords on those figures shows the SEO value.

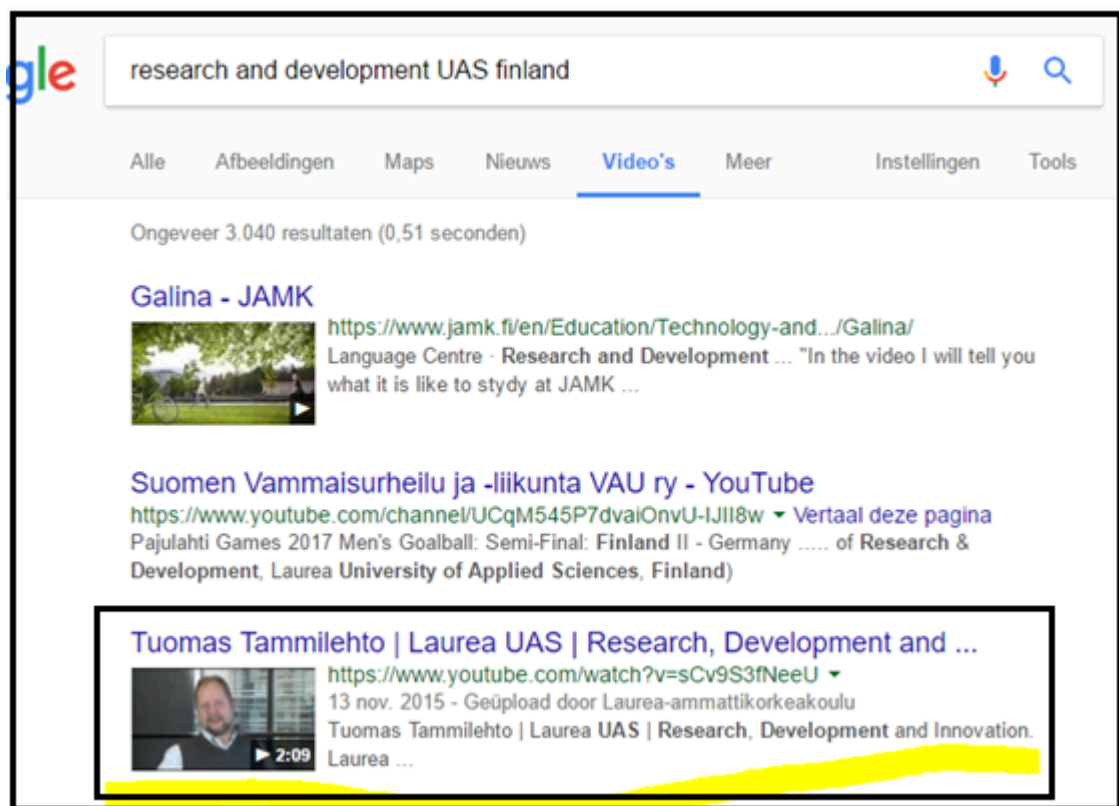


Figure 23: Video search result and bolding keywords

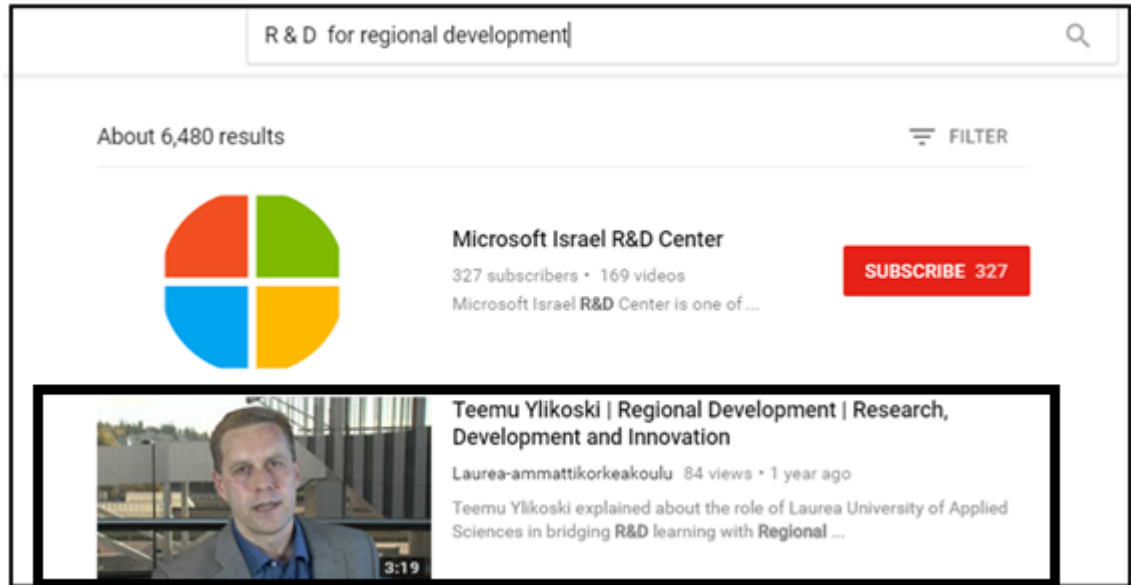


Figure 24: Video search result on Google

7.8 Analyzing the collected data

Date	Traffic Source/Medium	Pageviews	Unique pageviews	Page
1.3.2016 - 31.8.2016	Google/Organic	20,452	25,138	Home page
1.9.2016 - 28.2.2017	Google/Organic	29,880	16,440	Homepage
% Change		46.10 % ↑	52.91 % ↑	
1.3.2016- 31.8.2016	Google/Organic	1,085	757	Bachelor's programmes in English
1.9.2016- 28.2.2017	Google/Organic	2,398	1,851	Bachelor's programmes in English
% Change		121.01% ↑	144.52 % ↑	
1.3.2016- 31.8.2016	Google/Organic	2,535	1,997	Business management
1.9.2016- 28.2.2017		3,082	2,480	Business management
% Change		21.58 % ↑	24.19 % ↑	

Table 1: Data from Google Analytics

Success of the SEO implementation can be analysed using different KPIs and metrics from Google Analytics. Some of the common KPIs for the website visitation are page views, visits, session, bounce rate, click through rate and return of visitors. While some of the common metrics are page views and unique page views for individual pages and traffic sources which includes search keywords, referrals and search engine types.

For this thesis, only the organic traffic source from Google, pageviews and unique pageviews will be measured. It is because the thesis only includes the on-page SEO implementation.

The data is extracted from Google Analytics. The information shows the results before and after SEO implementation. The first row shows the data from 1st of March to 31st of August 2016 while the second row shows the data from 1st of September 2016 to 28 of February 2017. As it can be seen from Table 1, for the home page there is 46.10% increase in organic search while there is 52.91% increase in unique pageviews. Similarly, there is increment in pageviews and unique pageviews for other two remaining pages on the website. It shows that the implementation of SEO has contributed for the increase in traffic via organic search.

8. Conclusion

Website can be the main means of communication and medium to reach out to the prospects and current students, partners and all stakeholders. Implementing latest SEO practices can amplify web visibility, accessibility and brand awareness. Laurea UAS has more than one person creating, updating and editing contents and creating web pages from different locations. The main objective of the thesis was to create the handbook which includes latest SEO techniques and strategies so anyone reading the report can follow the latest SEO practices. The implementation section in this thesis mainly includes on-page SEO practices which plays vital role in SEO but these practices alone is not enough to improve the online visibility of the web pages. As mentioned above several factors like off page SEO, domain age, personalized search engine, geographical location etc. plays vital role for the search results.

SEO helps to improve the online visibility of the website or webpages in search engines like Google, Bing, Baidu, Yandex, Yahoo etc. It is the sustainable, economic and effective way of getting traffic to the website. Most importantly it plays a vital role in improving the web accessibility for all kinds of users. As Laurea's website has users from different parts of the world it is important that the website is easily accessible for all kinds of users and it should be a part of the digital marketing strategy. It is the continuous process and is constantly changing and evolving, every time new contents are added on the website it is important to follow the latest SEO techniques. Web pages or contents should be optimized for both users and search engines.

Search engine optimization strategy should be taken into consideration and SEO practices should be followed by anyone responsible for creating, updating and editing new pages and contents on the website. Similarly, organization should make most out of the social media channels.

9. Future work

During the thesis different latest SEO practices has been discussed, but due to the limitations complete SEO practices could not be implemented. Focusing on continuous SEO implementation and analysis of the contents could help to reach out to the targeted audience. There are several areas that can be researched in the future.

Huge number of users for the website are local users so improving the local search results is an important factor. So, one of the topic to research is the importance of local SEO. User experience is one of the core factor that affects the search engine results so analysing, evaluating and updating the website to improve user experience is important. As users for the mobile devices are increasing improving mobile experiences for users will play vital role as well. Social media channels are more in use, understanding its role for the academic organizations like Laurea is another area to focus in the future. Also, the use of intelligent personal assistants like Google now, Siri and Cortana are on the rise, research on optimizing the website for voice search should be considered.

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Appendix 1

Handbook

It is important to have the theoretical knowledge before creating a SEO strategy and implementation. On-page SEO alone is not enough to stay competitive on the search engine results. Both on-page and off-page SEO practices should be continuously implemented. Even though the above results show the improvement it won't last longer unless those pages are updated frequently.

Creating recommendations is the one of the aim of this thesis project. It is created so that anyone responsible for content management, creating the content and managing the content can use it to make them more user and SEO friendly. The following instructions is for anyone who creates new pages, create and update the content.

1. Mind map

Figure 25 is the SEO mind map which includes the short outline of the handbook.

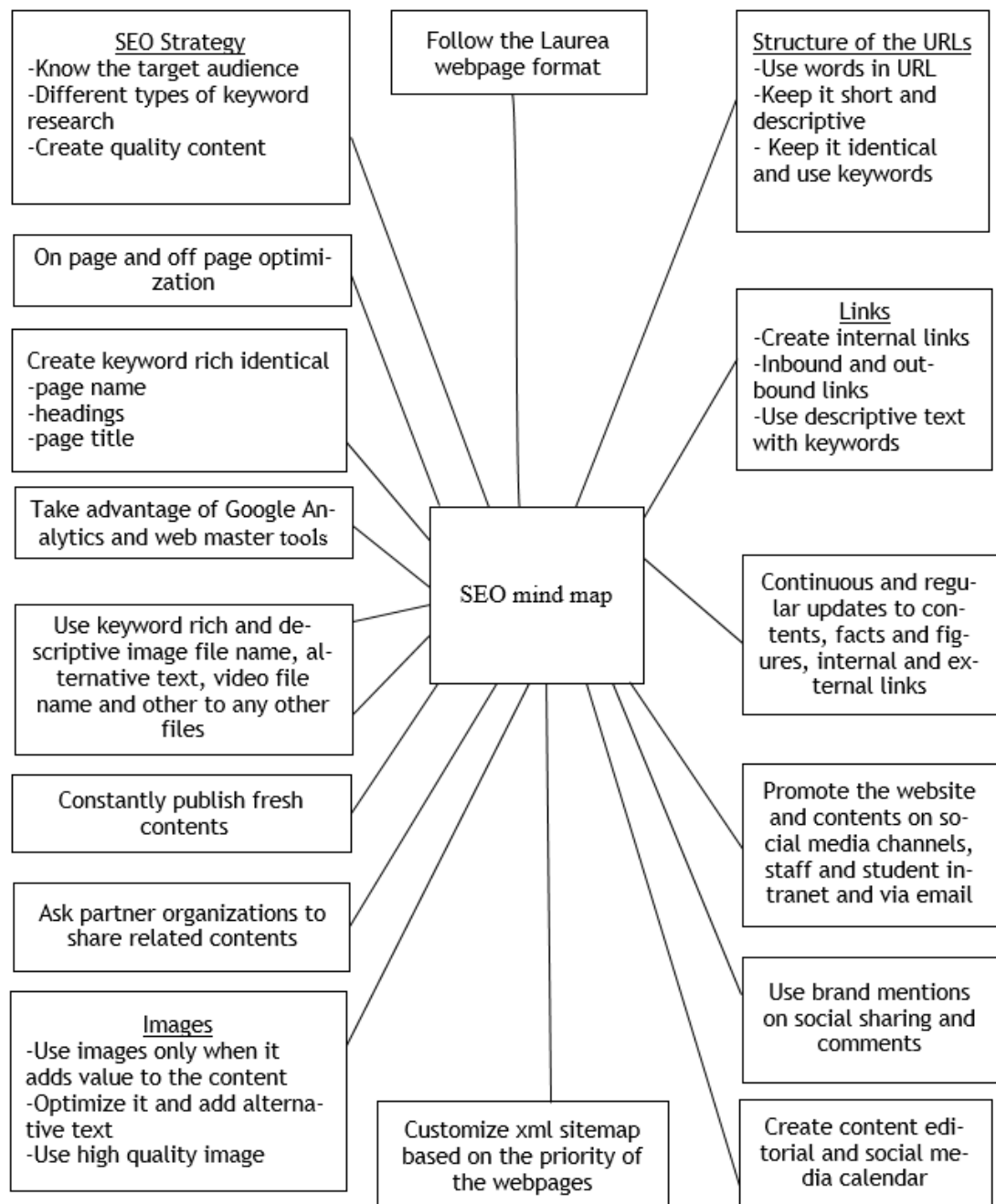


Figure 25 : SEO mind map

2. Keyword research

Before writing a content, it is important to be clear about the mission of the content and the target. Collecting keywords with keyword research methods will make it easier to write the content with the aim to rank for the focus keyword. It will make the task easier.

3. Creating the content

This section explains about organizing the text of the content to make it more user and search engine friendly. (Rakt, 2016) wrote on her blog that answering the following questions will help to write a quality content.

- What is the purpose of your piece? Why are you writing? What do you want to achieve?
- What will be the main message of your post? What is the central question you want to answer?
- Who are your readers?
- What information do you need to write your piece?
- In what order, will you present your information?
- What will be the structure of your article?

The following practices on the content will improve the user experience.

- Content divided into headings and subheadings, bullet points, bold text and links will allow users to easily scan the page.
- Dividing the text into descriptive headings and sub-headings with focus keywords will allows users and search engine to understand about the content of the page.
- Using bold text will attracts the users' attention as well as highlight the importance of the paragraph while using listings will increase the readability of the content.
- Italics text is difficult to read and is a good practice to avoid using it for a sentence or paragraphs.
- Coloured text might confuse users with links and might be an issue for the colour blindness users. A well-structured content will let users easily access the information from the page.

4. URLS

URL should include complete word(s) so that both the users and the robots will know about the page.

5. Links

Linking page to another page of the website will inform users about the related information. It also informs search engines that the link includes related information which helps in the ranking of the page. If more than one link is linking to another page it will be considered as spamming.

Link with descriptive text e.g. "read more about services for students" rather than the URL or text like "click here" will give more information for the users and search engines and is considered as user friendly for all kinds of users. Matching the title of the page will meet the users' expectation.

If the link is an outbound link and opens on a new tab, adding text like "opens in new tab" will help users with visual impairment and users using screen reader.

Identical link title can be used if it adds value to the link else it can be left blank.

6. Following the webpage format

Having the same page format or the structure of the webpage will inform users where to check for the information e.g. Address, contact details, links, news and so on. Laurea webpages have a standard page format.

7. Page name

Every page in the website should have an identical name. It will make the page more user friendly as well as search engine friendly.

8. Filename

One of the main feature of the Laurea web page structure is that it includes the hero image. It is important to make most out of that image. Having an identical hero image will not only differentiate the webpage from one another but also have an opportunity to optimize it for SEO purpose, meaning the image file with relevant keywords and alternative text will contribute for the page to be more SEO friendly.

Other files include videos and document files. Use keyword rich name and description to any kinds of files names.

9. Title of the page

By default, SharePoint 2013 use the page name as the browser title of the page. Customizing the page title with relevant keywords but also for search engines to understand about the page. Using the focus keywords on the page title will help search engine understand about the page which is a ranking factor and it will make the user want to click the page (Valk, 2016).

Title tag appears on the SERPs, it informs both the users and the search engines about the content of the page which means it also help users determine either to click the page or not. Being one of the important element of SEO practice, a properly optimized page title will have positive impact for the web ranking. Google wants to display relevant and unique results to the users so duplicate or missing title tag will not properly inform both users and search engines about the page (Terenteva, 2016).

While creating new pages in SharePoint 2013 CMS, if we do not give them an identical title name, by default they will have the same title tag. Figure 26 is an example of pages with duplicate page title. Search engines might consider the pages with duplicate title as duplicate content. Unique title tags help to improve performance in the search results and is important part of user experience (Deepcrawl, 2017).

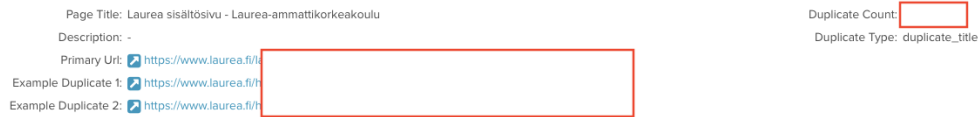


Figure 26: Example of duplicate page title (Deepcrawl, 2017)

10. Fresh contents

Every week several news is published on the news section of the website. Google likes fresh content and this is the section where fresh contents are published consistently. The following practices will help to reach to more users and improve the search engine visibility.

- Each news is a new page and the page layout includes one image on the page. So, descriptive image name and alternative text will improve the web accessibility as well as the image search results.
- Sharing the news on different social media channels targeting the user group will increase visitors on the site.
- Sharing the news does not only include the social media channels but also, email marketing, sharing on staff and student intranet and with partner organizations.

Social media posts including visual contents have more user engagement. A research was done by media blog in 2014, where over 2 million tweets from verified users were analyzed over the period of a month (Rogers, 2014). The results show that adding photo URL to the tweet can boost retweets by 35%. Figure 27 shows the statistics of user engagement factors.

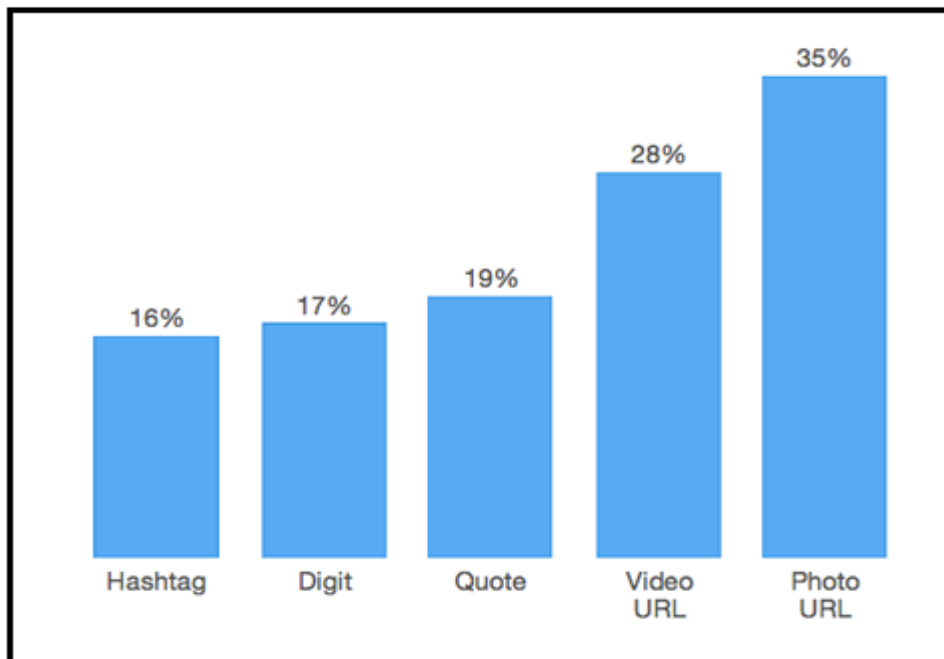


Figure 27: User engagement factors (Rogers, 2014)

11. Continuous and regular updates

Several information like facts and figures, internal links, external links are subject to change. By following the following practice on regular basis will ensure that the information on the page is up-to date.

- Create an update calendar to check the published content on regular basis.
- Check if the external links are working or not. Links can break due to several reasons like, deleting the page, moving the page, or change in web address. It will help avoid the broken links on the webpage.
- Having duplicate content on several pages are confusing to the search engines to decide which information is more relevant to the user. Instead use link to the page or an Image link.
- Updating facts and figures will help users find the required information from the page and keep the webpage up-to date.

Search engines like fresh content, adding new contents or updating the existing contents is a good SEO practice.

12. Social sharing and brand mentions

Sharing contents on different social media channels will increase the web traffic and user engagement. Mentioning brands on comments and posts on social media channels will contribute to the brand awareness. Using channels like Google+ and SlideShare will contribute for brand awareness and add SEO value to the website. Social sharing and brand mentions can be competitive advantages as well. Sharing related contents with partner organizations will not only increase web traffic but also help to reach out to more users.

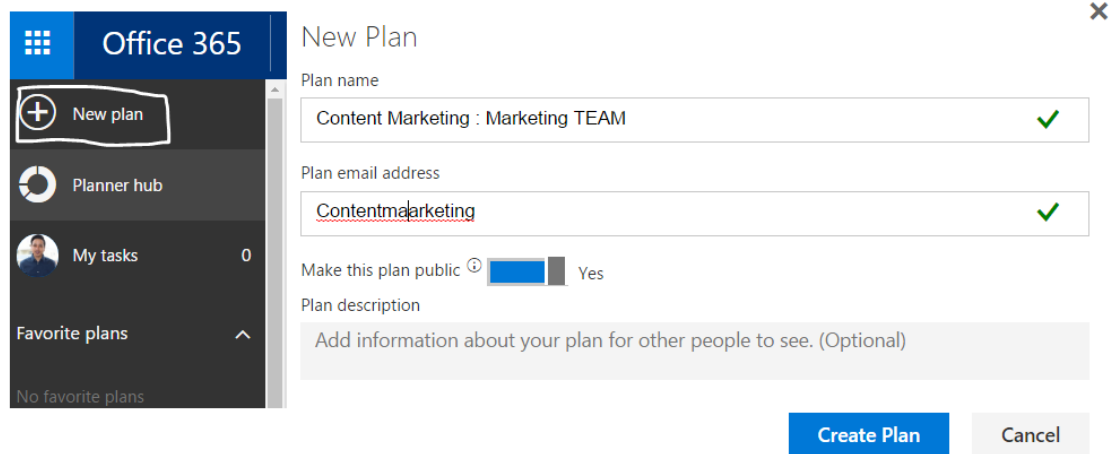
13. Editorial and social media calendar

Creating a content editorial calendar will make it easier to organize the content. It will help to publish well-balanced and varied content library on the website. Then social media content calendar can be used to promote and manage contents on different sites (McGill, 2017). It will help to inform significant information accessible to all relevant stakeholders (Sorokina, 2014). Using Microsoft excel online, Microsoft calender and Google sheets will make it easier to be informed about different events and activities on and out of campuses. It will help to organize the editorial calendar based on different events throughout the month or year. Lau-rea has several campuses and departments. It is important that everyone responsible for creating contents be on the same platform and be informed. The organization is using Microsoft office 365, using Microsoft planner application will even make it easier to assign and track the content marketing plan. It will also assist for the information management. The sample of the content calender planner is available on appendix 2.

Appendix 2

Creating a new plan using Microsoft Planner

Once the user is logged in with the Microsoft office 365 , the planner can be found from the application icon. Click the new plan icon and insert the name.



The screenshot shows the 'New Plan' dialog in Microsoft Planner. On the left, the 'Office 365' sidebar is visible with the 'New plan' button highlighted. The main form contains the following fields:

- Plan name:** Content Marketing : Marketing TEAM (with a green checkmark)
- Plan email address:** Contentmarketing (with a green checkmark)
- Make this plan public:** A toggle switch is set to 'Yes'.
- Plan description:** A text area with the placeholder 'Add information about your plan for other people to see. (Optional)'.

At the bottom right, there are two buttons: 'Create Plan' (blue) and 'Cancel' (grey).

Figure 28: Creating new plan in Microsoft Planner

1. From the dashboard members can be added to the plan

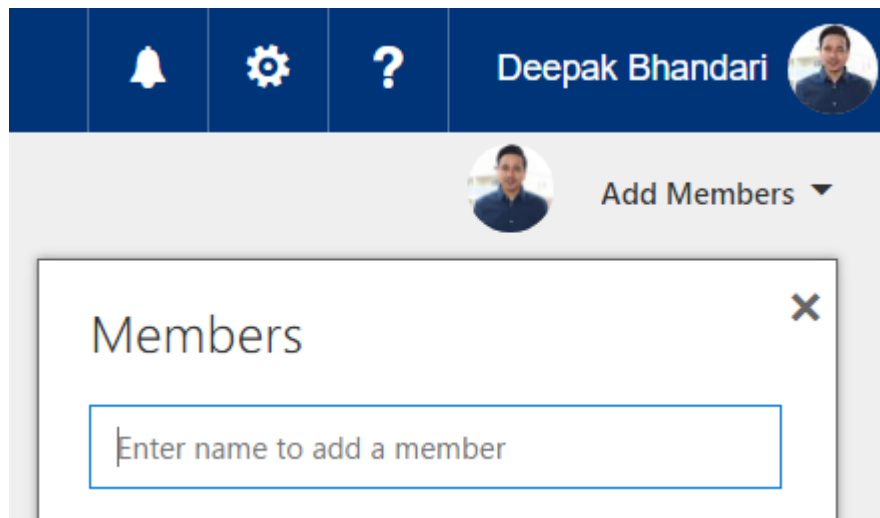


Figure 29: Dashboard to add members

2. From the dashboard new task can be assigned

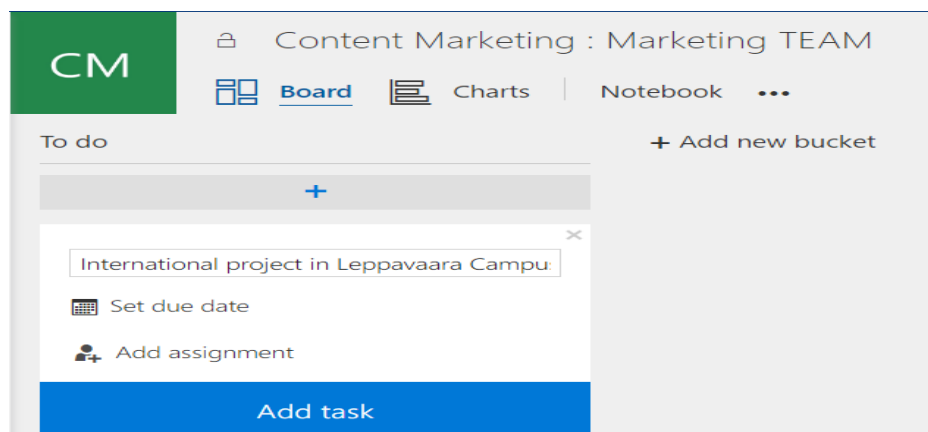


Figure 30 : Adding new task

3. Different buckets can be added inside one particular project. In this example the author has added admissions and project as sub-groups of content marketing group.

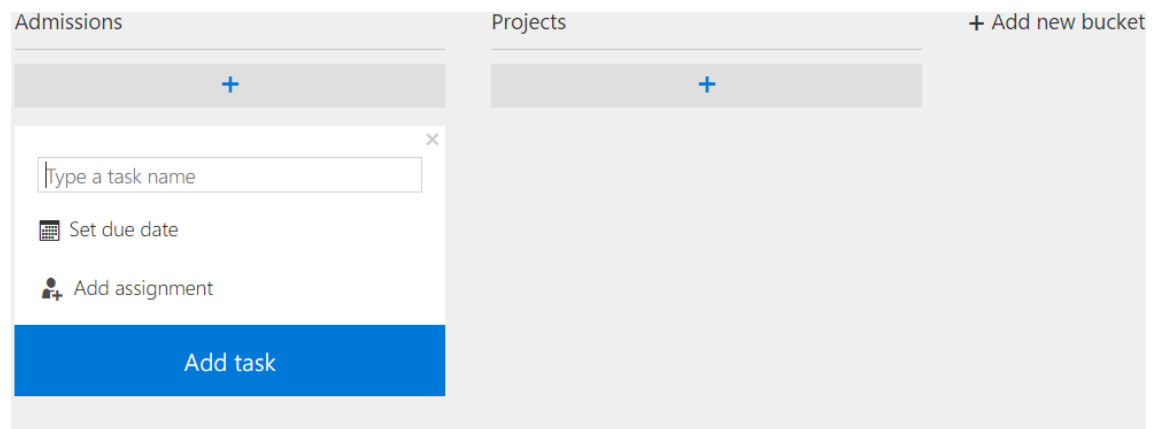


Figure 31: Adding new bucket for the project

4. Assignments can be tracked from the charts section of the application.

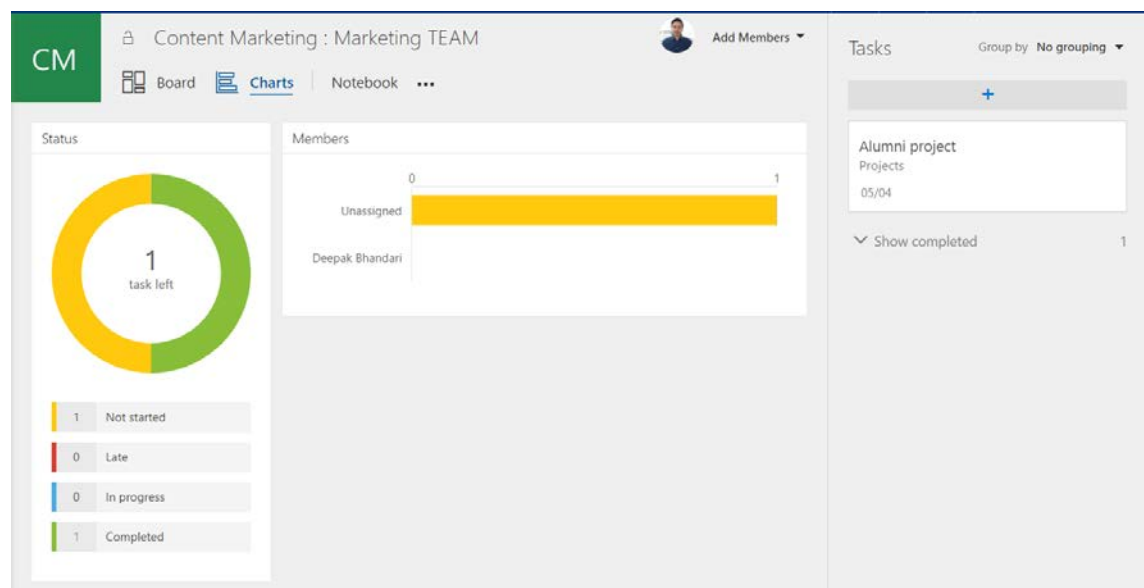


Figure 32: Tracking the assignments

5. Creating different groups based on the department or projects. It can be done by clicking new plan icon.

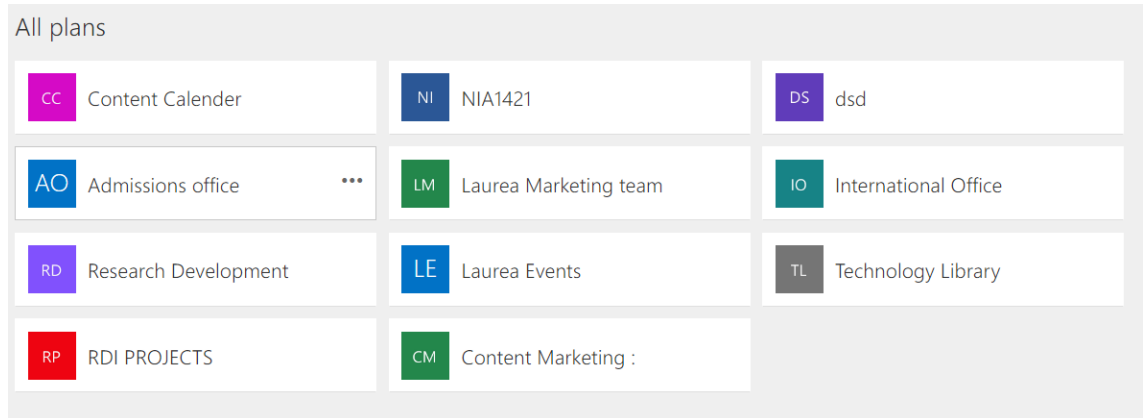


Figure 33: Example of different groups

6. By clicking the more option on the plan will lead to more features

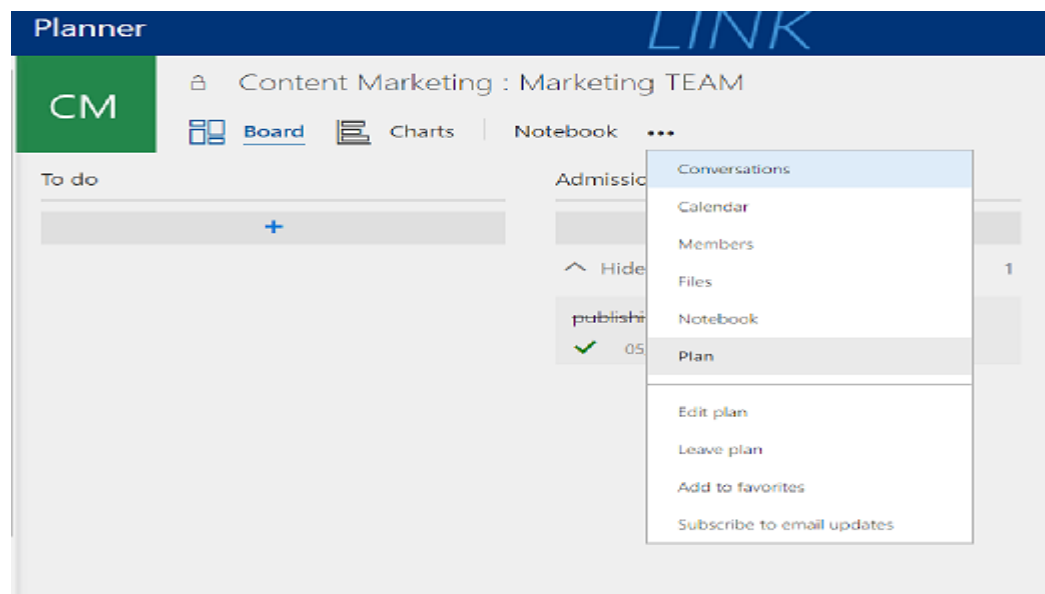


Figure 34 : Example of more options in Planner

By creating different groups in Microsoft Planner will not only help the marketing team to track the progress and results but also will help to filter the content.